

Claims

1. Metallic cylinder head gasket with at least one opening corresponding to a combustion chamber (1) of an internal combustion chamber, comprising a functional layer (2) and a support ring (4) lying there under, whereby the functional layer comprises a full bead (6), thereby characterized , in that the support ring (4) comprises a full bead (8), which is adjacent to the functional layer (2), and that the support ring (4) comprises a bead (10, 12), which is arranged on the side of the full bead (8) oriented away from the combustion chamber (1).
2. Cylinder head gasket according to claim 1, whereby bead (10) is disposed as a half bead.
3. Cylinder head gasket according to claim 2, wherein the support ring (4) lies on the side of the half bead (10) oriented away from the combustion chamber (1) on a lower level than on the side of the half bead (10) oriented towards the combustion chamber (1).

4. Cylinder head gasket according to claim 2, wherein the support ring (4) lies on the side of the half bead (10) oriented away from the combustion chamber (1) on a higher level than on the side of the half bead (10) oriented towards the combustion chamber (1).
5. Cylinder head gasket according to claim 4, wherein the support ring (4) on the side of the half bead (10) oriented away from the combustion chamber (1) is at a distance (a) from the functional layer (2).
6. Cylinder head gasket according to claim 4, wherein the support ring (4) on the side of the half bead (10) oriented away from the combustion chamber (1) is adjacent to the functional layer (2).
7. Cylinder head gasket according to claim 1, wherein the bead (12) is disposed as a full bead.
8. Cylinder head gasket according to claim 7, wherein the support ring (4) on the side of the full bead (12) oriented away from the combustion chamber (1) lies on the same level as the side of the full bead (12) oriented towards the combustion chamber (1).

9. Cylinder head gasket according to claim 7, wherein the support ring (4) lies on the side of the full bead (12) oriented away from combustion chamber (1) on a lower level than on the side of the full bead (12) oriented towards combustion chamber (1).
10. Cylinder head gasket according to claim 7, wherein the support ring (4) lies on the side of the full bead (12) oriented away from combustion chamber (1) on a higher level than on the side of the full bead (12) oriented towards combustion chamber (1).
11. Cylinder head gasket according to claim 10, wherein the support ring (4) on the side of the half bead (10) oriented away from combustion chamber (1) is at a distance (a) from functional layer (2).
12. Cylinder head gasket according to claim 10, wherein the support ring (4) on the side of the full bead (12) oriented away from the combustion chamber (1) is adjacent to functional layer (2).
13. Cylinder head gasket according to claim 3, wherein the support ring (4) on the side

of the full bead (12) oriented away from the combustion chamber (1) is adjacent to the functional layer (2).

14. Cylinder head gasket according to claims 7 to 13, wherein the tip of the full bead (12) is directed downwards.

15. Cylinder head gasket according to claims 7 to 13, wherein the tip of the full bead (12) is directed upwards.

16. Metallic cylinder head gasket with at least one opening corresponding to a combustion chamber (1) of an internal combustion engine, comprising a functional layer (2), a support ring (4) and a lower functional layer (14), wherein the support ring (4) is arranged between upper functional layer (2) and lower functional layer (14) and is adjacent to the lower functional layer (14), and wherein the upper functional layer (2) comprises a full bead (6), which is adjacent to the support ring (4), thereby characterized, in that the lower functional layer (14) comprises a bead (16, 18), which is arranged on the side of the full bead (6) oriented away from the combustion chamber (1).

17. Cylinder head gasket according to claim 16, wherein bead (16) is disposed as a half bead.
18. Cylinder head gasket according to claim 7, wherein half bead (16) is so formed, that the lower functional layer (14) lies on the side of the half bead (16) oriented away from the combustion chamber (1) on a higher level than on the side of the full bead (12) oriented towards the combustion chamber (1).
19. Cylinder head gasket according to claim 8, wherein the lower functional layer (14) on the side of the half bead (16) oriented away from the combustion chamber (1) is adjacent to upper functional layer (2).
20. Cylinder head gasket according to claim 8, wherein the lower functional layer (14) on the side of the half bead (16) oriented away from the combustion chamber (1) is at a distance (a) from the upper functional layer (2).
21. Cylinder head gasket according to claim 8, wherein the half bead (16) is so formed, that

it is equal in height to the support ring (4).

22. Cylinder head gasket according to claim 7, wherein half bead (16) is so formed, that the lower functional layer (14) lies on the side of the half bead (16) oriented away from the combustion chamber (1) on a lower level than on the side of the full bead (12) oriented towards the combustion chamber (1).

23. Cylinder head gasket according to claims 7 to 12, wherein the support ring (4) extends from the bead foot of the full bead (6) oriented towards the combustion chamber (1) up to the bead foot of bead (16,18) oriented towards the combustion chamber (1).

24. Cylinder head gasket according to claim12, wherein the support ring (4) extends from the bead foot of the full bead (6) oriented towards the combustion chamber (1) over and above the bead foot of bead (16,18) oriented towards the combustion chamber (1).

25. Cylinder head gasket according to claim 12, wherein the support ring (4) extends from the bead foot of the full bead (6) oriented towards the combustion chamber (1) up to the bead foot of bead (16,18) oriented away from the combustion chamber (1).

26. Cylinder head gasket according to claim 6, wherein bead (18) is disposed as a full bead.
27. Cylinder head gasket according to claim 16, wherein full bead (18) is so formed, that the lower functional layer (14) lies on the side of the full bead (18) oriented away from the combustion chamber (1) on the same level as on the side oriented towards the combustion chamber (1).
28. Cylinder head gasket according to claim 16, wherein full bead (18) is so formed, that the lower functional layer (14) lies on the side of the full bead (18) oriented away from the combustion chamber (1) on a higher level than on the side oriented towards the combustion chamber (1)
29. Cylinder head gasket according to claim 16, wherein full bead (18) is so formed, that the lower functional layer (14) lies on the side of the full bead (18) oriented away from the combustion chamber (1) at a distance (a) from the upper functional layer (2).

30. Cylinder head gasket according to claim 16, wherein the lower functional layer (14) on the side of the full bead (18) oriented away from the combustion chamber (1) is adjacent to upper functional layer (2).
31. Cylinder head gasket according to claim 16, wherein full bead (18) is so formed, that the lower functional layer (14) lies on the side of the full bead (18) oriented away from the combustion chamber (1) on a lower level than on the side oriented towards the combustion chamber (1).
32. Cylinder head gasket according to one of claims 16 to 19, wherein the tip of the bead of full bead (18) is directed downwards.
33. Cylinder head gasket according to one of claims 16 to 19, wherein the tip of the bead tip of full bead (18) is directed upwards.
34. Cylinder head gasket according to one of claims 6 to 23, wherein the support ring (4) extends at least from one bead foot up to the other bead foot of full bead (6).

35. Cylinder head gasket according to one of claims 6 to 22, wherein the support ring (4) extends from the bead foot of full bead (6) oriented towards the combustion chamber (1) up to the bead foot of bead (16,18) oriented towards the combustion chamber (1).

36. Cylinder head gasket according to one of claims 6 to 22, wherein the support ring (4) extends from the bead foot of full bead (6) oriented towards the combustion chamber (1) up to the bead foot of bead (18) oriented away from the combustion chamber (1).